

Manage Fields By Prescription, Not Recipe

NORCROSS, Ga. — Recipes make successful cooks, not successful farmers. Today's farmers have access to volumes of agronomic information. Research scientists and extension personnel can tell you what crop to grow, how deep to seed, how much fertilizer to apply, which herbicides to use, when to harvest, and how to manage crop residues.

With so much knowledge, why not a simple recipe for 60-bushel wheat or 160-bushel corn? Unlike baking, where the chef has strict control over ingredients, temperature and cooking time, farmers have only partial control over their crop inputs. Two key ingredients, rainfall and sunshine, are completely controlled by Mother Nature. Other ingredients, such as soil productivity and quality, can only be partially controlled by the farmer. Each growing season and every field are different, making management by recipe difficult, if not impossible.

Field boundaries seldom follow soil boundaries. Fields might look similar on the surface, but soil properties can vary considerably within any field, especially in rolling topography. Knolls are generally drier, often eroded and less productive than other areas of the field. Lower slope soils tend to have more moisture, more plant-available nutrients, and more ability to produce higher yields. As expected, fertilizer, crop protection chemicals and other crop needs can vary considerably within the same field.

Managing fields by prescription is one way to reduce field variability and to promote uniform crop growth. Prescription management requires a thorough knowledge of the field. Information on variations in soil characteristics, plant

growth, cropping history, past yields, pest and weed problems, and past herbicide and fertilizer applications all influence input decisions.

Variable rate application technology provides an important tool for prescription management. Application equipment is available which allows fertilizers, and other inputs whose optimum rates are influenced by soil characteris-

tics, to be changed "on-the-go." On-board blending and impregnation of fertilizers and herbicides allow application rates to be matched to crop needs and varying soil properties. Reducing field variability makes crop growth and maturity more uniform simplifying spraying, cultivation, and harvesting operations.

Placing fertilizers and herbicides in areas of the field where they are most needed increase

plant use efficiency and economic returns. Improved plant use efficiency lessens the potential for leaching and surface runoff losses that pose environmental threats. Depending on initial soil test levels and yield variability, economic returns from site-specific management can exceed \$50 per acre; however, net returns of \$5 to \$15 per acre are more common. Higher returns would be expected from fields with greater variability

and moderate soil test levels.

For consistent results and higher profits, management needs to be site-specific. Remember, manage your fields by prescription, not by recipe.

For more information, contact Dr. Terry L. Roberts, western Canada director, PPI/PPIC, 2204 19th Street, Coaldale, Alberta, Canada T1M 1E8, (403) 345-4460.

Wood Products At Farm Show

HARRISBURG (Dauphin Co.) — A recent Penn State survey shows that Pennsylvania is one of the top three states for kitchen cabinet manufacturing — another indicator of growth in the state's wood products industry. It employs nearly 96,000 people and accounts for about 10 percent of the state's manufacturing income.

The public can learn about the importance of the wood products industry in the state and national economy by visiting the Penn State College of Agricultural Sciences exhibit at the Pennsylvania State Farm Show, January 9-14. The event is held at the Farm Show Complex in Harrisburg.

Videos and hands-on displays will show the steps needed to produce quality kitchen cabinets, from processing the raw material to packaging and shipping.

Manufacturers rely on Pennsylvania's abundant supply of valuable hardwoods, such as red oak and cherry. The state leads the nation in hardwood timber volume.

"About 16,000 people are involved in manufacturing, engineering and management and sales for the Pennsylvania kitchen cabinet industry," said Dr. Paul Blankenhorn, professor of wood

technology in the School of Forest Resources. "Manufacturers use \$220 million in raw materials annually to create \$1.1 billion worth of products. Seventy percent of these cabinets are sold outside the state.

"People just can't get enough kitchen cabinet space," he said. "That's why home remodeling efforts usually begin in the kitchen."

A new set of cabinets can cost from \$12,000 to \$30,000 to more — a considerable investment that adds up to good business for manufacturers.

The Penn State survey found that more than half of the state's 239 kitchen cabinet firms are located in the rapidly developing southeast.

"Some of the state's small firms concentrate on serving local needs through custom-made products," said Blankenhorn. "But the majority of medium-sized and large firms serve the national market. They purchase about two-thirds of their raw materials within Pennsylvania and distribute the finished products nationwide."

The survey to determine the size and distribution of the kitchen cabinet industry is part of Penn State's efforts to help Pennsylvania wood products manufacturers gain an edge on competitors.

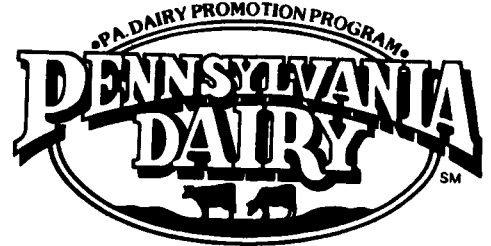
Since 1988, the university has been involved in the Ben Franklin Partnership Program and the Hardwood Initiative, a state-sponsored economic development program that supports education, research and technical assistance for the forest products industry. A major goal of the initiative is to bring more value-added manufacturing to Pennsylvania.

Penn State helps the wood products industry by sponsoring short courses in kiln drying, finishing and machinery. Faculty members also visit individual companies to

recommend new manufacturing techniques or marketing strategies. The wood products undergraduate program provides graduates for professional positions in the industry.

Kitchen cabinet making is just one facet of the wood products industry, says Blankenhorn. Manufacturers also create furniture, floors, doors, caskets, paper and numerous small products such as cutting boards and tool handles.

The Farm Show opens to the public on January 9 and closes on January 14. Hours are 8 a.m. to 9 p.m. Saturday, Monday, Tuesday and Wednesday; 11 a.m. to 6 p.m. Sunday; and 8 a.m. to 4 p.m. Thursday. Parking is \$2 and admission is free.



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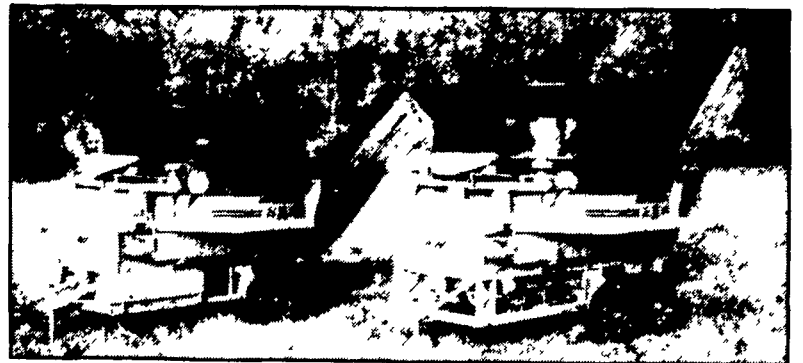
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